

WHAT IS CLAIMED IS:

1 1. An image capturing system for automatically recording and
 2 watermarking a plurality of parameters in a captured image, comprising:
 3 a central processing unit for controlling a plurality of functions and
 4 operations of said system;
 5 image capture means, operatively connected to said central processing
 6 unit, for generating a digital image of an observed image frame and for generating a
 7 plurality of image data associated with said generation of said image;
 8 wireless communication means, operatively connected to said central
 9 processing unit, for receiving data from objects in said observed image frame when
 10 said image is generated;
 11 geographic location determining means, operatively connected to said
 12 central processing unit, for determining geographic coordinates of said system when
 13 said digital image is generated;
 14 means for determining a time and a date when said image is generated;
 15 information receiving means, operatively coupled to said central
 16 processing unit, for receiving data associated with a user of said system when said
 17 digital image is generated;
 18 image processing means for receiving said plurality of parameters and
 19 recording said plurality of parameters with said generated digital image, said plurality
 20 of parameters including said plurality of image data, said object data, said time data,
 21 said date data, said location data, and said user data; and
 22 means, operatively coupled to said image processing means, for
 23 watermarking said plurality of parameters into said image.

1 2. The system of claim 1, further comprising means for specifying
 2 which of the plurality of parameters should be recorded with said image and for
 3 specifying which of said plurality of parameters should be watermarked in said image.

1 3. The system of claim 2, further comprising means for
2 determining which of the plurality of parameters are specified to be recorded with
3 said image and for determining which of the plurality of parameters are specified to
4 be watermarked in said image.

1 4. The system of claim 1, further comprising means for extracting
2 said watermarked parameters from said watermarked image.

1 5. The system of claim 4, further comprising means for comparing
2 said extracted parameters with corresponding recorded parameters of said image to
3 authenticate said image.

1 6. The system of claim 1, further comprising means for preventing
2 said watermarking of said images if an image quality of said image is altered above a
3 threshold.

1 7. The system of claim 1, further comprising image compression
2 means, operatively coupled to said image processing means, for compressing said
3 image.

1 8. The system of claim 7, wherein said plurality of parameters are
2 watermarked in one of said compressed image and said image.

1 9. The system of claim 1, further comprising orientation
2 determining means, operatively coupled to said central processing unit, for
3 determining orientation data of said system when said digital image is generated; said
4 orientation data being one of said plurality of parameters.

1 10. The system of claim 1, further comprising
 2 means for receiving one of verbal data and verbal commands;
 3 and
 4 means for processing said one of received verbal data and
 5 received verbal command, said processed verbal commands being used to control one
 6 of a plurality of function and operations of said system, said processed speech data
 7 being one of said plurality of parameters for annotating said digital image.

1 11. The system of claim 1, further comprising means for
 2 determining said location of said system when said geographic location determining
 3 means is inoperable.

1 12. The system of claim 1, wherein said plurality of image data
 2 associated with said generation of said image includes one of an image mode, image
 3 quality, exposure duration, aperture length, light meter reading, flash status, lens
 4 focal length, auto focus distance, frame number, and a combination thereof.

1 13. In an image capturing system, a method for authenticating a
 2 captured image, comprising the steps of:
 3 measuring a plurality of parameters associated with said captured
 4 image;
 5 watermarking said plurality of parameters into said captured image to
 6 generate a watermarked image, and generating a verification key associated with said
 7 watermarked parameters;
 8 extracting said plurality of parameters from said watermarked image
 9 with said associated verification key; and

10 comparing said extracted plurality of parameters from said watermarked
11 image with said measured plurality of parameters associated with said captured image,
12 whereby said captured image is authenticated if said extracted parameters match with
13 said measured parameters.

1 *Sub A* 14. The method of claim 14, further comprising the step of
2 recording said measured plurality of parameters associated with each captured image,
3 said extracted parameters being compared with said recorded parameters to
4 authenticate said captured image.

1 15. The method of claim 14, further comprising the step of specifying
2 which of said measured plurality of parameters is to be watermarked into a
3 corresponding captured image.

1 16. The method of claim 14, further including the step of
2 transmitting said watermarked image and said associated verification key to a remote
3 system, and said extracting step and said comparing step are performed in said remote
4 system.

1 17. The method of claim 14, further comprising the step of
2 compressing said captured image prior to said watermarking step, whereby said
3 measured parameters are watermarked into said compressed image.

1 18. A method for verifying the authenticity of a captured image,
 2 said captured image being generated by an image capturing system having means for
 3 measuring a plurality of parameters associated with said captured image and means
 4 for watermarking said plurality of parameters within said captured image, said method
 5 comprising the steps of:

6 specifying at least one of said plurality of parameters to be measured
 7 and watermarked by said image capturing system;

8 capturing an image of a desired object with said image capturing
 9 system;

10 watermarking said captured image of said object with said specified
 11 parameters;

12 generating a corresponding verification key based on said watermarked
 13 parameters;

14 storing said watermarked image and said corresponding verification
 15 key;

16 retrieving said watermarked image and said corresponding verification
 17 key;

18 extracting from said watermarked image said watermarked parameters
 19 using said verification key;

20 comparing said extracted parameters with said specified parameters to
 21 determine if said extracted parameters match said specified parameters.

1 19. The method of claim 18, further comprising the step of
 2 recording said specified parameters, wherein said recorded parameters are compared
 3 with said extracted parameters.

- 1 20. The method of claim 19, wherein said step of recording said
2 specified parameters includes one of electronically recording said specified parameters
3 with said captured image and manually recording said specified parameters associated
4 with said captured image.

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